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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,570

04/26/2007

Frans Witteveen

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6231

38137 7590 07/15/2009  
ABELMAN, FRAYNE & SCHWAB  
666 THIRD AVENUE, 10TH FLOOR  
NEW YORK, NY 10017

EXAMINER

KOSINSKI, IRINA Y

ART UNIT

PAPER NUMBER

4131

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,570	<b>Applicant(s)</b> WITTEVEEN ET AL.	
	<b>Examiner</b> IRINA KOSINSKI	<b>Art Unit</b> 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/23/2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This application is a national stage entry of PCT/NL05/00160, filed on 03/04/2005, claiming foreign priority to the application # 04075741.1, filed on 03/04/2004.

Claims 1-20 were canceled by the applicant. Claims 21-37 are currently pending.

#### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) was submitted on 03/23/2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Specification***

1. The abstract of the disclosure is objected to because it contains unacceptable language, such as "said particles". Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: page 10, lines 22-23: the sentence needs to be reworked to achieve clarity.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

4. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 36 provides for the use of a particulate composition, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 36 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 21-30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over SKELBAEK et al. (WO 9117821), in view of Burger et al. (PGPub 2004/0037890, and Kim et al. (Patent # 6190722 B1).**

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10. SKELBAEK et al. disclose chewing gum containing micro-capsules comprising flavourant embedded in a matrix material (claims 1, 16). Colloids, such as modified starches, gum, gelatine may be used as matrix material. Preferred matrix former is gelatine having a bloom strength of from 0 to 300. Furthermore, matrix material may include saccharides (page 4, lines 15-25). Range for the flavorant, such as eucalyptus oil (page 4, line 7) is from 0.1 to 40% by weight of the finished microcapsule (claim 13), which is the same as in claim 21 of the instant application. Above mentioned limitations encompass some limitations of instant claims 21, 23-24, 26. SKELBAEK et al. also disclose methods for making microcapsules, such as spray drying (see examples 1-11), encompassing instant claim 30. Example 1 teaches that during the spray drying process a product fraction and a coarse fraction are produced. Typically, the product fraction consisted of the micro-particles having size of 53-300 $\mu$ m, and constituted 98% of the dried product, which encompasses claim 27 of the instant application. Skelbael et al., do not disclose the use of fat, instead, it uses flavor oil/wax mix to encapsulate the flavor. Skelbael et al., also does not specifically disclose the use of film-forming carbohydrate and carbohydrate plugging material, although it discloses the use of starches, gum and saccharides as being included in the matrix material, which are, according to the instant claim 21, used as film-forming carbohydrates and carbohydrate plugging materials. The ranges for gellatine, fat, and film-forming carbohydrate and carbohydrate plugging material are also not addressed.

11. Burger et al. disclose a composition comprising and active compound, such as flavor, film forming carbohydrate ( 5-95% by wt.), mono-, di-, and trisaccharides (5 to

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30% by wt.), and maltodextrin (modified starch) (0 to 30% by wt.) (see abstract).

Maltodextrin is a known substitute for gellatine, therefore the range for maltodextrine is used here to evaluate the range for gelatine. The ranges for ingredients disclosed by the reference overlap with the ranges specified in claim 21 ((*In re Peterson*, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003)). Burger et al. disclose the use of film forming carbohydrates, such as cellulose derivatives in a range from 5 to 95% by weight (page 2, paragraph 0012 and 0019), saccharides, such as glucose, fructose, etc. (page 2, paragraph 0020) (plugging material), flavor and maltodextrin (instead of gelatine), but do not disclose the use of fat for flavor encapsulation. The reference partially encompasses instant claim 21.

12. Kim et al. discloses a process for preparing a flavor composition by mixing an oil soluble flavor with a melted edible fat having a melting point from about 30°C to 93°C to form a solution of the oil soluble flavor in the melted fat, further resulting in free flowing particulate flavor with the particle size of less than 1 mm (see abstract), encompassing instant claims 21-22, 25. Claim 13 of the reference discloses that the fat that is used according to the invention could be a hydrogenated vegetable oil, a partially hydrogenated vegetable oil, a wax or stearine ( which is a triglyceride) . The reference teaches the use of fat and wax as alternatives. The concentration of fat in the mixture is from 0.1 to 50% by weight, which overlaps the instant range of claim 21 ((*In re Peterson*, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003)).

13. Kim et al. encompasses instant claim 22 insofar that it discloses that flavor oil is mixed with melted fat to form a solution (column 1, lines 39-42). It would render obvious

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for one skilled in the art that majority (at least 90%) of the flavoring is dispersed homogeneously or dissolved when you are making a solution like that, which encompasses instant claim 22.

14. It would have been prima facie obvious for the person skilled in the art at the time of invention to combine teachings of SKELBAEK et al. concerning the use of gelatine as a matrix for flavor encapsulation with Burger et al. concerning the use of film forming carbohydrate and saccharides (plugging material), and teachings of Kim et al. concerning the encapsulation of flavor in fat. One would be motivated to substitute the wax with the fat having a melting point of at least 35°C in order to receive an expected benefit of delayed flavor release.

15. Claim 29 recites that the composition of claim 21, which is a combination of flavor, gelatine, fat, film forming carbohydrate and plugging material, constitutes at least 70% of the composition. Claim 34 discloses a flavor delivery system comprising 5-70 wt% of a composition consisting of a carbohydrate plugging material and 5-70 wt% of composition according to claim 22 (comprising flavor dispersed in fat). Generally, differences in concentration will not support the patentability of the subject matter encompassed by the prior art unless there is evidence indicating that such concentration is critical (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

16. **Claims 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over SKELBAEK et al. (WO 9117821), Burger et al. (PGPub 2004/0037890), Kim et**

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**al. (Patent # 6190722 B1) as applied to claims 21-30 and 37 above, and further in view of Kramer et al. (Patent # 2886446).**

17. Claims 21-22 are rejected above. Claim 35 describes a flavor delivery system comprising 5-70% of a composition according to claim 22 and 5-70 wt% of liquid flavor.

18. Kramer et al. disclose a chewing gum composition comprising gellatin as encapsulation agent, containing 20% of “fixed” or encapsulated flavor and 80% of “unfixed” flavor (column 5, lines 3-9).

19. Claim 34 discloses a flavor delivery system comprising a composition of claim 22, and 5-70% of a composition consisting of a carbohydrate plugging material, selected from the group of different saccharides. It is within the skill of the art to work out the ranges to achieve desirable composition ((In re Peterson, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003)).

20. Claims 32-33 disclose formulas describing the relationship between the Bloom number of gelatin, the relative amounts of gelatin and fat, and a “relative flavor release rate value” (see page 13, lines 8-25 of the instant specification). Claim 32 corresponds to a slow rate of flavor release, while claim 33 corresponds to a relatively quick rate.

21. Kramer et al. disclose the possibility to modify the properties of the product gum by use of mixtures of flavoring compositions characterized by different ratios of gelatin to oil (flavor containing oils, such as peppermint) (column 4, lines 58-60, 13-15).

Reference also teaches that it would be possible to separately prepare dry flavoring compositions of various Blooms, and then add them to the gum, where low Bloom



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mixture would result in more rapid flavor release and a high Bloom mixture will result in slower flavor release (column 4, lines 38-50).

22. Claim 31 of the instant application discloses the use of an outer coating layer containing at least 50% of the hydrocolloid, such as shellac. This is a well-known technique used in food industry, for example, in manufacturing of confectionary products, such as Skittles® candy.

23. It would have been prima facie obvious to one skilled in the art at the time of invention to combine teachings of SKELBAEK et al, Burger et al, and Kim et al. concerning a composition comprising microparticles consisting of flavor, fat, film forming carbohydrate, carbohydrate plugging material and gelatin with teachings of Kramer et al. concerning the possibility of varying of flavor release rate by adjusting Bloom number of gelatin, and mixing of "fixed" and "unfixed" flavor in the chewing gum composition. One would be motivated to do so in order to achieve an expected benefit of formulating a flavor delivery system that is characterized by various flavor delivery rates. Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in combining teachings of above mentioned references to formulate a chewing gum comprising a flavor delivery system that is characterized by different flavor release rate.

24. Claims 21-37 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRINA KOSINSKI whose telephone number is (571)270-1334. The examiner can normally be reached on Monday through Friday 7:30 to 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on (571)272-0847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/IRINA KOSINSKI/  
Examiner, Art Unit 4131

/Patrick J. Nolan/  
Supervisory Patent Examiner, Art Unit 4131